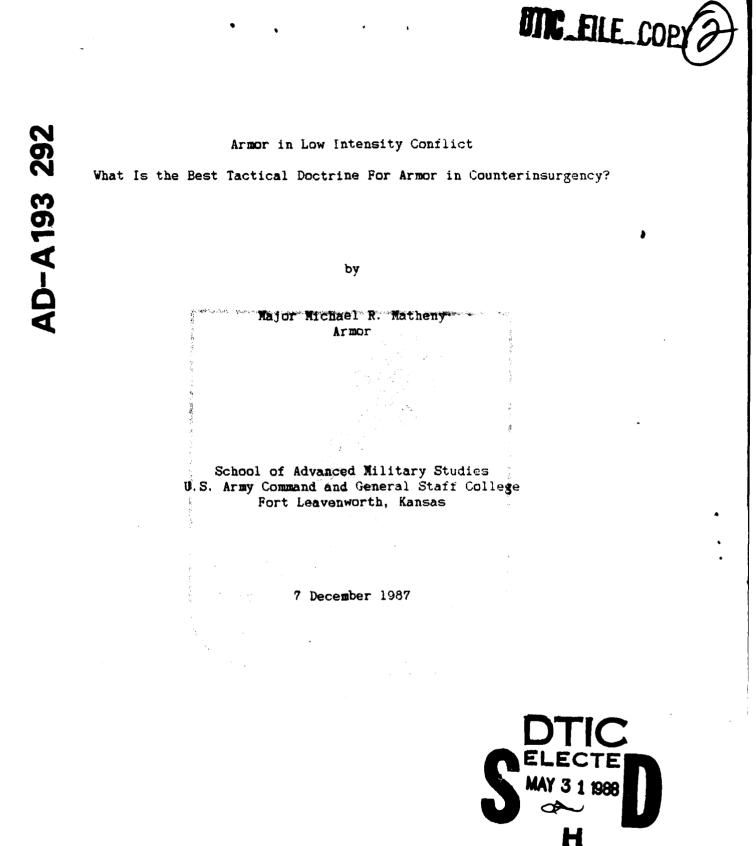
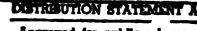


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Armor in Low Intensity Conflict

What Is the Best Tactical Doctrine For Armor in Counterinsurgency?

by

Major Michael R. Matheny Armor

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7 December 1987

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ABSTRACT

ARMOR IN LOW INTENSITY CONFLICT--WHAT IS THE BEST TACTICAL DOCTRINE FOR ARMOR IN COUNTERINSURGENCY? by MAJ Michael R. Matheny, USA, 49 pages.

Although armor was developed and organized primarily for high intensity warfare, in the future low intensity conflict will be the most prevalent form of war. Since the army has invested so much of its combat power and force structure into mechanized forces, it should be prepared to use those forces in LIC. This monograph uses J.F.C. Fuller's five combat functions: protect, find, fix, hit, and destroy, to examine the proper role of armor.

Vietnam and Afghanistan are analyzed as case studies of the employment of mechanized forces in LIC. In both conflicts the armies found it necessary to modify their conventional doctrine for armor. In Vietnam the U.S. Army successfully used mechanized forces to hit and protect. However, the reliance on indirect fires to destroy the enemy limited the effectiveness of armor. In Afghanistan the Soviets have enjoyed less tactical success with armor because of terrain, organization, and their operational plan for victory.

A look at current doctrine reveals the need for a combined arms doctrine for heavy and light forces in LIC. Current doctrine also does not address the most effective armor organization for the conduct of operations in LIC--the armored cavalry regiment.

The study concludes that the most appropriate tactical doctrine for armor in LIC depends upon the combat function it serves within the combined arms team. These functions can vary with terrain, organization, and the operational plan. At the very least, armor can protect and hit. When properly organized and employed it can also be used to find, fix, and in combination with other arms, destroy insurgent forces. Mechanized forces are best employed in small scale cordon search operations from battalion to brigade size. Their mobility and firepower are best used in encirclement operations or as a reaction force. Finally, the near term and future implications of this study are considered under Fuller's combat functions.

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I. INTRODUCTION

Armor came into existence to fulfill a tactical role on the high intensity battlefield. Since World War II this role has been well understood and continues to drive the development of armor organization, equipment, and tactical doctrine. Since 1945, however, wars of low intensity have increased in frequency. Unlike high intensity warfare, armor's role at the lower end of the spectrum of war has not been so well understood.

Both the United States and the Soviet Union have gained experience with employing armor in low intensity conflict (LIC). In each case the expectation of armor's role on the low intensity battlefield was different than the tactics finally hammered out in the field. For example, the planners in the U.S. Military Assistance Command in Vietnam originally saw no need for tanks with forces deploying to that country. When tanks first arrived in Vietnam in March of 1965 it was by accident. In fact, when informed that American tanks had been deployed, Ambassador to Vietnam Maxwell Taylor was upset that such equipment "not appropriate for counterinsurgency operations" had been sent. Despite the apprehension of the planners, once having proved its value, the number of armor units in Vietnam steadily increased. By the end of the war 24% of the combat maneuver battalions which deployed to Vietnam were either mechanized a infantry, armor, or armored cavalry.

The Soviet experience with armor in low intensity conflict began with their invasion of Afghanistan in 1979. Unlike the U.S., it appears the

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Soviets overrated the role of armor. In a number of articles prior to the invasion which discussed mountain warfare, several military authors writing in <u>Voennyi Vestnik</u> confidently asserted that tanks could operate "jointly with motorized rifle and artillery units, and even sometimes independently." By 1982 after three years of fighting, articles discussing armor operations 5 in mountainous terrain were much more cautious. In the same year the popular press in the West was claiming that the Soviets had changed their 6 tactics in Afghanistan.

In both wars each army found its prewar tactical doctrine for armor needed some adjustment or change when applied to low intensity conflict. With such experience it should be possible to determine what is the most appropriate tactical doctrine for armor on the low intensity battlefield. It should not be expected that the U.S. and the Soviet armies developed the same tactical doctrine for armor in such warfare. In each case there may be different solutions to tactical problems which may vary due to a host of differing circumstances. Although there may be many similarities, it is perhaps more important to determine what function armor served on the low intensity battlefield. Once having determined the function of armor common to the LIC battlefield it may be possible to determine the most appropriate offensive tactical doctrine.

The tactical doctrine for armor in low intensity conflict is significant for several reasons. Armor in the U.S. Army represents 30% of 7the army's firepower. This is certainly too great a percentage of the army's combat power not to be included in bringing the enemy to battle. The failure to include armor in low intensity conflict fragments the

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combined arms team; combined arms has been the single most important trend f in successful warfare in the twentieth century. Finally, since 1945 low intensity conflict has been the prevalent form of war and is likely to f continue to be the most frequent military action involving the U.S. Army.

In summary, armor was developed for the high intensity battlefield. Both superpowers, however, have gained experience with armor in low intensity conflict. This experience should be examined to determine the most effective tactical doctrine for armor in LIC. Only then will the U.S. Army be prepared to provide the combined arms team with all the combat power necessary to win decisively the tactical battle in the most frequent type of wars.

II. THE THEORY OF ARMOR IN LIC

"Low intensity conflict is a limited politico-military struggle to political, military, social, economic, or psychological objectives." LIC cuts across the spectrum of violence "up to, but not including, combat petween regular forces." U.S. doctrine organizes our response to LIC into four categories: foreign internal defense, terrorism counteraction, peacekeeping operations, and peacetime contingency operations. Of these categories only foreign internal defense involves large scale military action against insurgent forces. Consequently, this study will focus on the employment of armor in foreign internal defense.

Foreign internal defense (FID) operations are aimed at each of the three stages of insurgency. In Phase I, a latent or incipient insurgency.

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insurgents form a shadow government and begin attacks on police and other government targets. In Phase II, guerrilla warfare, the insurgent government is established in a guerrilla controlled area. The insurgent's military goal in this stage is to gain control of more territory while tying down government forces. In Phase III, mobile warfare, the insurgents openly battle government forces in order to sieze key geographic and 12political objectives.

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Normally, only in Phase III when the government has demonstrated an inability to defend itself would American combat units be committed 13 directly to fight the insurgents. The defeat of the enemy on the battlefield is only a part of the total FID strategy to defeat the insurgency. Other efforts to counter the insurgency include civil affairs and psychological operations as well as programs designed to eliminate popular support for the anti-government forces. Once committed to tactical operations, however, the objective of U.S. military forces is "to destroy or neutralize insurgent tactical forces and bases to establish a secure 14 environment in which balanced development programs can be carried out."

Armor's ability to contribute to this objective is constrained by several factors, primarily terrain and the nature of low intensity conflict. Insurgents seek security for their bases by establishing them in remote areas, commonly in difficult terrain. Traditionally, the employment of armor is limited in such terrain. Additionally, the low intensity battlefield is nonlinear and located within the country we seek to assist. The battle is fought among the people in urban as well as rural areas, therefore, there is a desire to limit the violence where possible. Finally,

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the enemy usually holds the initiative, making and breaking contact at will. Armor was originally designed to operate on the high intensity battlefield. In high intensity conflict armor maximizes its firepower, shock, and mobility to seize the initiative and destroy the enemy. Obviously, the factors of terrain, enemy, and the nature of low intensity conflict underscore the limitations of armor in limited war.

It is wrong, however, merely to suggest that these factors influence the employment of armor simply by limiting it. Rather, these peculiarities of low intensity conflict affect the function of armor within the combined arms team. As early as 1927 J.F.C. Fuller insisted that the traditional arms be viewed and developed in accordance with their tactical function on the battlefield. He listed these functions as: finding, holding, hitting, I_5 protecting, and smashing. Of course, the great armored theorist maintained that mechanized arms were capable of fulfilling all these functions. Fuller did recognize that certain conditions, primarily terrain, could affect the function of an arm of service and therefore, its employment.

The combined arms team consists of complementary arms and weapons which contribute to victory by matching those arms with the tactical functions described by Fuller. On the high intensity battlefield armored cavalry may find, the artillery may hit, and the mechanized forces may protect themselves with armor while they hold and eventually smash the enemy. In different conditions such as rugged terrain it may be more appropriate for the infantry to find and smash, while the artillery and armor hit. Few conditions can be imagined which would call for completely fragmenting the combined arms team.

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Terrain alone has never separated armor from the combined arms team. In the Pacific during World War II the U.S. Army committed twenty tank battalions to fight campaigns in some of the world's most rugged jungles. Even in the mountainous terrain of Italy, Greece, and Korea, armor formations achieved notable successes. The function of armor in these areas was different, however, than that of armor in less restrictive theaters. Indeed, in difficult terrain armor was most often used as mobile assault artillery. The infantry served to find and fix while armor and artillery hit. In combination the arms would smash or destroy the enemy.

Unlike the enemy on the linear battlefields of World War II, the enemy in low intensity conflict will not only be elusive but will also normally possess the initiative. Thus in addition to terrain, the nature of low intensity conflict will also affect the function of armor. Obviously, on the high intensity battlefield Fuller believed mechanized forces could do it all: find, fix, hit, protect, and destroy. The conditions in LIC often preclude this happy state of affairs. Difficult terrain will reduce the mobility of armor on the battlefield. Providing there is even a primitive road network, however, it will not significantly reduce armor's ability to get to the battlefield. The noise of armored vehicles and their reduced mobility on the battlefield will inhibit mechanized forces from finding the enemy. The tremendous firepower which armor brings to the battle will be a key advantage in hitting the enemy. Armor will still provide protection from small arms and shrapnel through armor plating. Destroying the enemy will be much more difficult. Reduced battlefield mobility means that armor by itself will be rarely able to fix and finish the enemy. The initiative

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and ability of the insurgent to break contact can only be taken away by forcing him to fight. This can be done through encirclement, traps, or incentive. If the insurgent can be provided sufficient incentive to fight, for his bases or through deception, enough firepower may be quickly massed to destroy him. In any case firepower and manuever must be used.

In many ways J.F.C. Fuller anticipated the role of armor would play in what we now call low intensity warfare. In 1927 Fuller conceded that the older arms of light infantry and cavalry could best fulfill the tactical I_{4} functions in very difficult terrain. By 1932 he was more inclined to grant a greater role to the mechanized arms in "warfare in undeveloped and I_{7} semi-civilized countries." Fuller had his eyes on the northwest frontier of India but commented not only on mountain warfare but also on bush fighting. He stressed the role of the airplane, motor vehicle, and scout tank. Among his insights was the need for a grid system or zones of control. The chief value of mechanized forces lies in their ability to react quickly, moving from zone to zone wherever needed. He also suggested chemical warfare and the use of the laager (circling the mechanized I_{7} vehicles to form a defensive ring).

By 1945, however, the role and importance of armor was enshrined on the high intensity battlefield. The fighting in rugged terrain all over the world confirmed armor as a member of the combined arms team. Not until the wars of revolution swept the third world in the wake of World War II did the regular armies face modern low intensity warfare. In the case of the United States and the Soviet Union each army employed substantial armor forces in its struggle with insurgents. Initially, both armies

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employed armor with a doctrine designed for high intensity warfare. In each case following the initial offensive employment the armies struggled to find the appropriate function for armor on the battlefield. Armor's role in the combined arms team in the LIC environment caused a reconsideration of tactics. The appropriate tactical doctrine for armor in LIC is linked to its tactical function. To arrive at the most appropriate tactical doctrine for armor in LIC, the theory of the function of armor must be examined in light of the experience of the two superpowers in low intensity warfare.

III. HISTORICAL CASE STUDIES

VIETNAM

The breakup of the French colonial empire in Indochina provided the environment for both low and mid intensity warfare. Following the French withdrawal from Vietnam in 1954 Communist North Vietnam continued to seek unification of the divided country. President Eisenhower endorsed the Geneva Accords which split Vietnam and pledged help to maintain the I^{9} independence of South Vietnam. In the same year a U.S. Military Assistance and Advisory Group for Vietnam was established. From 1954 U.S. involvement grew with the increasing level of violence. North Vietnam initiated a communist insurgency in the south which began to make significant headway by 1960. The insurgents, the Viet Cong (VC), were able to field battalion size units in attacks against the government. By 1964 North Vietnam began

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to deploy regular units to the South in anticipation of the last and **20** decisive stage--mobile warfare.

The U.S. responded to the deteriorating situation by committing American ground troops to prevent the collapse of the South Vietnamese government. One year later in 1965 substantial U.S. ground troops began to arrive. In March two battalions of marines landed to secure the Da Nang Airbase. In May the 173d Airborne Brigade deployed from Okinawa. These units were quickly followed by the 1st Brigade, 101st Airborne Division and later in September by the 1st Cavalry Division (Airmobile). The major build up of U.S. forces took place in 1966 as the 4th, 25th, and 9th Infantry Divisions arrived in country.

The first U.S. tank unit to move to Vietnam was actually a platoon from the 3d Marine Tank Battalion. This platoon was part of the Marine battalion landing team sent to Da Nang in March of 1965. These were the tanks which Ambassador Taylor deemed inappropriate for counterinsurgency operations. Many senior officers including Chief of Staff General Harold K. Johnson shared Ambassador Taylor's views. When the 1st Infantry Division was scheduled for deployment to Vietnam, General Johnson decided that it would deploy without its two organic tank battalions or mechanized infantry. The Chief of Staff believed, "The presence of tank formations <u>Al</u> tends to create a psychological atmosphere of conventional combat...."

Armor units did begin deploying to Vietnam and quickly proved their value. As a test case General Johnson did approve the deployment of the 1st Squadron, 4th Cavalry with its tanks. In November of 1965 at Ap Bau Bang Troop A, 1st/4th Cavalry demonstrated that the firepower of armor

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units was a valuable asset in defeating determined Viet Cong attacks. With this positive example the Army approved the requests of Major General Frederick C. Weyand, the 25th Infantry Division commander, to take his 22 mechanized units to Vietnam.

The decision to deploy cavalry squadrons, tank battalions, and mechanized infantry in support of the infantry divisions was significant. Even more significant was the decision to send the 11th Armored Cavalry Regiment. As early as 1965 General Westmoreland, Commander of the U.S. Nilitary Assistance Command in Vietnam, requested the cavalry regiment to provide highway security along Route One. After considering other possible missions for the regiment, General Westmoreland requested a change in the table of organization and equipment (TO&E). The General wanted to substitute light tanks (M41) for medium tanks (M48). The pentagon was reluctant to make changes but eventually a compromise was reached. The 11th ACR deployed with modified M113s replacing tanks in the cavalry troops, but each squadron kept its tank company with M48 tanks. With the arrival of the 11th ACR in September, 1966, it became the largest U.S. armor unit to serve during the war. With substantial armor forces in Vietnam the question was how would they be used?

The doctrine which the first armor units brought with them to Vietnam was written for high intensity warfare. FN 17-1 Armor Operations published in 1963, just three years before the American build up, was the first to mention "operations against irregular insurgent forces." The manual dedicated only three pages to the subject, mentioning the primary $\frac{24}{24}$ offensive operations as encirclement, attack, and pursuit. Excepting

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encirclement, these missions were the same as those listed for conventional operations. FM 17-95 The Armored Cavalry Regiment published in 1960 reaffirmed the traditional missions, "The armored cavalry regiment is 25 employed on reconnaissance, security, and economy of force missions." The manual does mention that the ACR must be prepared for general or Finitcu war, but there is no discussion of employment in limited war. These manuals obviously, focused wholly on the employment of armor in high intensity warfare. The early armored units in Vietnam "literally had to invent tactics and techniques, and then convince the Army that they 26 worked."

Armor had been doctrinally riveted to the potential high intensity battlefield of Europe. Increasingly, however, in the early 1960's the armor community began to discuss the role of armor in guerrilla warfare. There were obstacles, however. In 1962 the Combat Development Agency at Ft. Knox produced a study entitled <u>Role of Armored Cavalry in Counterinsurgency</u>. This farsighted report suggested that a properly modified cavalry regiment would be well suited for counterinsurgency operations. The study conceded that traditional concepts of employment would not necessarily apply to such operations. The report discussed offensive operations including the encirclement, raid, pursuit, ambushes, and counterattacks. Interestingly, the terrain analysis which represented the most likely areas of employment included Columbia, Venezuela, and Guatemala, but not Vietnam. When distributed for comment, the Infantry Combat Development Agency at Ft.

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armored cavalry for offensive operations, rather they stressed that cavalry 27 was more suited for route and base security.

In the same year in which the Combat Development Agency fielded this report, ten armor oficers arrived as advisors to the South Vietnamese Army. U.S. armor advisors remained with the South Vietnamese Army virtually until the end of the war. These soldiers also contributed to the discussion of the role of armor in counterinsurgency. In February of 1966 an army concept team delivered a report entitled "Armor Organization for Counterinsurgency Operations in Vietnam". This report was based on the observation of the six South Vietnamese armored cavalry squadrons. Although noting several deficiencies the report concluded that the M113 was well suited for counterinsurgency operations and that envelopment and 29 pursuit were good missions for mechanized units.

A few months later in the May-June issue of <u>Armor Magazine LTC Raymond</u> Battreall, the senior armor advisor in Vietnam, wrote an article entitled, "Armor in Vietnam". LTC Battreall observed that armor is of little use for reconnaissance; it is best employed when used in offensive operations to strike, encircle, or sweep. In these operations armor provides the necessary firepower to destroy the enemy. The author further noted that 30 the M113 was used essentially as a main battle tank. Clearly, this observer believed that the function of armor was not finding but hitting. The army did not begin to doctrinally address these issues until almost a year after U.S. armor units deployed to Vietnam. The first armor units to arrive suffered from a lack of adequate doctrine. A "no tanks in the jungle" attitude prevailed at the Military Assistance Command Vietnam

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(MACV) Headquarters. In 1965 in one of the first armor units deployed, the 1st Squadron, 4th Cavalry, the tanks were withdrawn and held at the 3) squadron base. Senior decisionmakers, General Westmoreland among them, believed the Vietnamese terrain unsuitable for tanks. In fact, a survey later showed that 46% of Vietnam could be traversed by armored vehicles 32 year round. It took six months to convince General Westmoreland that 33 tanks could be used on combat operations.

With the deployment of additional armor units in 1966, the pattern of offensive employment began to emerge. Although the 11th ACR had been requested by MACV to provide route security for Highway #1, it was soon involved in frequent search and destroy missions. In executing Operation Atlanta to clear Highway #1, the regiment conducted search and destroy, route security, reconnaissance, and base security missions. Of those missions mentioned in the after action report, 39% were search and destroy. Significantly, the report mentions only four reconnaissance missions out of .34 a total of 70 operations. Almost from the moment it arrived, the squadrons of the regiment began to be used as regular combat manuever battalions rather than in the traditional manner of cavalry.

Commanders also began to take note of the firepower which mechanized forces could bring to the battle. The 11th ACR's first contacts with the enemy were ambushes. Colonel William W. Cobb, the commander, noted that "Maximum firepower and bold execution of counterambush techniques will 35effectively neutralize the ambushing force." The operations in 1966 also demonstrated that the armored cavalry could bring the firepower to the battle quickly, in fact, "the regiment has the ability to move a tremendous

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amount of firepower in a relatively short period of time and survive in .3G fighting condition." Surely the firepower and ability to move quickly appeared significant in comparison with the foot infantry. Armored cavalry could move and hit, but what about the tank battalions?

The tank battalions which deployed to support the infantry could also hit. The firepower of the tanks was in great demand and as a consequence, the tank companies and platoons were farmed out to the infantry. In one notable case a tank platoon from the 1st BN, 69th AR was placed under the operational control of the 173d ABN BDE and operated 250 miles from its 37 parent battalion. In combat operations, tanks often led the way through the jungle because they could protect. The tanks crushed their way through 35 the anti-personnel mines and booby traps so injurious to the infantry. However, the tanks could also be used to protect routes and bases. In fact, the tank battalions were more often used defensively rather than offensively. In the after action report of the 1st BN, 69th AR for the quarterly period ending 31 July 1966, 60% of the missions mentioned consisted of either base or route security.

In October of 1966 the Army published new field manuals on armor operations which finally began to address in detail the role of armor in counterinsurgency. The new manuals reflected a good deal of change from the earlier neglect of low intensity warfare. FM 17-1 <u>Armor Operations</u> of 1966 expanded the coverage of internal defense to 25 pages. The offensive operations listed for armor included: encirclement, pursuit, search and clear, raid, and counterattack. The manual indicated that air cavalry or other observation helicopters will conduct reconnaissance. There was an

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extensive discussion of encirclement which is "the best method of fixing .39 insurgent forces in position." The manual stressed combined arms and stated that "armored cavalry units are particularly suited for sustained $\frac{40}{40}$ operations against tactical insurgent forces..." The 1966 version of FM 17-95 The Armored Cavalry Regiment devoted ten pages to the subject of counterinsurgency operations. Reflecting perhaps the 1962 Combat Development Agency study, this manual listed the offensive operations of the ACR as: encirclement, pursuit, ambush, raid and support of the $\frac{41}{40}$ infantry. These manuals, particularly FM 17-1, were a good start, but the doctrine still overlooked some key aspects of the pattern which emerged early in the war and was later confirmed in subsequent operations.

By 1967 the U.S. build up provided considerably more armor units. In January the U.S. Army began large scale offensives with operation Gedar Falls. A month later the Army launched a multi-division operation, Junction City. Reminiscent of Fuller's advice, Vietnam had been divided into four corps tactical zones and further subdivided into alphabetical war zones. These large scale operations took place in the III Corps tactical zone. the target of Cedar Falls was an extensive enemy base area in the Iron Triangle northwest of Saigon. Participating in the operation were several armor formations. Two mechanized infantry battalions, a tank battalion, and a divisional cavalry squadron helped to scal two sides of the triangle. The llth ACR (-) attacked west from the point of the triangle to cut the area in two. Then, from all sides the U.S. forces began to close in and conduct search and destroy operations.

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Operation Junction City further demonstrated the utility of mechanized forces. This operation called for the 1st and 25th Infantry Divisions to establish blocking positions in the shape of a large horseshoe in War come C northwest from Saigon along the Cambodian border. Once the blocking positions were established the 11th ACR and a brigade of the 25th ID attacked north into the open end of the horseshoe. The target of the operation was the headquarters of the communist insurgency (Central Office of South Vietnam (COSVN), the VC 9th Division, the 101st North Vietnamese Army (NVA) regiment, and the enemy bases within the area. The operation went as planned and brought on several engagements. When the sameke cleared, the bases were destroyed, the VC 9th Division was battered, but the

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COSVN escaped. The engagements in which mechanized forces participated pointed to their function on the battlefield.

The battles at Prek Klok II and Suoi Tre emphasized the firepower and ability of mechanized forces to react. At Prek Klok II the VC attacked the 2d BN, 2d IN (Nechanized) during the night of 10 March. The firepower of the U.S. units assisted by air and artillery made it a rather one sided 44affair--the VC lost 197 men, the defenders lost 3. At Suoi Tre the 3d EN, 22d IN and the 2d BN, 77th FA came under heavy night attack at Firebase Gold. The VC hammered the firebase with mortar rounds and assaulted with waves of infantry. The following morning the situation apeared desparate. A relief column consisting of the 2d EN, 34th AR and the 2d EN, 22d IN (Mechanized) was quickly dispatched. By 0915 hours... "the mechanized infantry and armor column broke through the jungle from the southwest. With their 90mm guns firing cannister rounds and all machine guns blazing, they moved into the advancing Viet Cong, cutting them down. Shortiy, 45

As impressive as these actions might have been they pointed to some significant problems. Prek Klok II and Suoi Tre were defensive victories. Junction City had attempted to find, fix, and destroy the enemy. Although numerous insurgent bases were destroyed, the enemy simply moved into sanctuaries in Cambodia. Essentially a very large encirclement operation failed to find or fix the enemy. The VC were destroyed only to the extent they were willing to offer themselves up to destruction. Mechanized units again demonstrated they could conduct combat operations in a counterinsurgency environment. They could react quickly and bring

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substantial firepower to bear whenever the enemy could be made to fight, but they could not materially assist in finding or fixing the enemy.

Key problems with the tactical offense in counterinsurgency is finding and fixing the insurgent. Even if you find him, unless you can fix him, it will be impossible to destroy the enemy. It is the inability to fix the insurgent which grants him the initiative. Referring to the enemy in the Cedar Falls-Junction City operations, General Bernard Rogers noted, "It was a sheer physical impossibility to keep him from slipping away whenever he wished if he were in terrain with which he was familiar--generally the $\frac{46}{7}$ 88% of all fights were initiated by the enemy. Encirclement still appeared the best means of fixing the insurgent, but large scale operations were not the solution.

Large scale offensive operations were rarely attempted again. At the same time in which Cedar Falls-Junction City took place, a team of officers and civilians conducted a comprehensive study of armor operations in Vietnam. The <u>Machanized and Armor Combat Operations in Vietnam</u> (MACOV) study was a <u>multi-volume</u> report which covered doctrine, tactics, organization, mobility, and related matters. The study confirmed the pattern of offensive employment which began to emerge in 1966. The cavairv $\frac{99}{100}$ squadrons were most often used as combat maneuver battalions. The study emphasized that the advantages of mobility and firepower were so great that $\frac{97}{100}$ foot infantry was often cross attached to mechanized infantry. Cross attachment was frequent among all the combat arms. In this way all the arms could complement the function of the others. The very fact that the

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armored cavalry was a balanced combined arms team encouraged its employment as a regular maneuver battalion.

The functions which the combat arms fulfilled in Vietnam made for inherent strengths and weaknesses in their employment. Helicopter units attempted to find, airmobile infantry attempted to fix (block and encircle), while mechanized units provided their armor protected firepower to hit. Invariably, artillery and tactical air assets were used to finish or destroy the enemy. The strengths in this arrangement lie in minimizing American casualties and playing to the U.S. technological advantages.

The weakness in this tactical doctrine was that it often handed the initiative to the enemy. Most of the offensive contact with the enemy took the form of a meeting engagement. Once contact was made, the immediate manuever force attempted to fix the enemy while it summoned all the available artillery and tactical air assets. In order to safely use the indirect fires, units would, at best not press the fight, at worst it would withdraw. The attempt to finish or destroy the enemy by artillery and air $\frac{50}{50}$ often resulted in breaking contact. This is one key reason why the enemy retained the initiative---he could escape. Another problem with using indirect fires to finish the enemy was its destructiveness. In LIC, the counterinsurgency force has a vested interest in limiting the destruction in a nation they intend to save. As U.S. forces attempted to restrict the employment of indirect fires, they weakened the system upon which their tactical offensive doctrine was based.

The most effective use of this doctrine was in cordon search operations in which the devastating fire of artillery was not needed. A classic

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cordon search of this type which demonstrates the potential function of armor within the combined arms team occurred at Chanh Luu in August of 1968. Chanh Luu was a suspected VC supply base that had been previously searched without result. The 3d Squadron, 11th ACR drew the mission to conduct a cordon search of the village. The squadron was task organized with I and K troops, two tank platoons from M Company, B and D Companies 2d BN, 16th IN, and further supported by the 5th Division of the South Vietnamese Army (ARVN).

The plan called for a deception effort, a quick cordon by U.S. units, and a search by ARVN troops. The deception effort aimed at convincing the enemy that a nearby village, Binh My, was the target. False messages were sent and troop movements were planned to support the deception. On 3 August K Troop was 25 kilometers from Chanh Luu. Starting its move at 0600 hours K Troop moved to Firebase Normandy II and picked up D Company by 1600. Mounted in K Troop's Mil3s, the force moved north in the direction of the deception target, Binh My. At 1400 hours B Company was airlifted northwest of Normandy II and also began a sweep away from the real target. I Troop with the two tank platoons began a sweep from firebase Normandy I south away from Chanh Luu. At varying times during the night all four elements turned back to converge on Chanh Luu. By 2300 hours the cordon was established.

At 0700 hours the next day elements of the 5th ARVN division airlanded, advanced on the village, and conducted the search. Sporadic fights erupted and later that night the VC attempted to break through the cordon. The firepower of the mechanized units defeated every attempt and by 10 August

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the village was declared clear. The results were impressive: 22 VC killed (including one NVA general), 122 VC prisoners, and a good deal of equipment 51 and supplies. In this case intelligence found the enemy and the encirclement fixed him. It was a prime example of how mechanized forces can be used to function within the combined arms team to fix, hit, protect, and contribute to the destruction of the enemy in LIC.

Despite the problems in the offensive doctrine, mechanized forces were 52effective in Vietnam. Normally, within the combined arms team, armor functioned to protect U.S. troops and hit the enemy. Its ability to quickly bring tremendous firepower against the enemy is undeniable. Armor's inability to do more to fix and destroy the enemy was not so much the result of terrain, but the product of the functions it served within the doctrine. The tactical doctrine was fashioned from a number of influences not all of which stemmed from an operational concept to achieve our strategic goals. The desire to save American lives and avail ourselves of our strengths were among these. Regardless, of the outcome of the war, U.S. 53forces were able to win the tactical battles. Doubtless mechanized forces might have been more effective if they had been used to fulfill more tactical functions.

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AFGHANISTAN

The first Soviet postwar experience in low intensity conflict began on 24 December 1979 with their invasion of Afghanistan. In a well planned operation, an airborne division seized the capital at Kabul while two more motorized rifle divisions attacked from across the Soviet border. The invasion force grew into the 40th Combined Arms Army with seven motorized rifle divisions, and airborne division, supported by five air assault 57 brigades. The Soviet divisions came into Afghanistan with no specific doctrine for counterinsurgency. They came armed only with their superior technology and a conventional doctrine to employ it.

Combat operations in Afghanistan essentially means mountain warfare. Half the country is covered by the mountains of the Hindu Kush with peaks rising to 17,000 feet. Although the Soviets consider combat in mountains as warfare under special conditions, they have no specific doctrine for fighting guerrillas in mountainous terrain. Apparently, they believe that tactics suitable for regular forces will work equally as well against guerillas. The key elements in their offensive doctrine for mountain warfare is their unshakeable faith in combined arms and the importance of mechanized forces.

Soviet doctrine forsees an important role for all the arms of service in mountain warfare. Recognizing the difficulty of massing artillery fires and "the limited accuracy of artillery in the direct fire role, tanks are assigned to supplement the artillery and provide support by fire for the 55 manuever force." The Soviets consider the BMP particularly suited for

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combat in mountainous areas because its armor can protect the infantry **56** squad while its armament can hit the enemy. With the exception of special operations forces the entire Soviet army is mechanized. The very force structure of the Red Army suggests that mountain warfare will primarily be fought by mechanized forces. The doctrine does state that motorized ritle troops will dismount to attack, but they will attack with support from both tanks and BMPs. Airmobile infantry is also important and used to ceture high ground otherwise inaccessible to the motorized troops. All the combined arms are employed to encircle and destroy the enemy in a coordinated attack.

In a typical attack, helicopters conduct reconnaiscance ahead of the main body. On the ground, combat recennaissance patrols soout ahead to identify less accessible routes for possible use by the outflanking detachment. The main body preceeds up the most accessible route. The commanding heights along the route of advance or to the rear of the enemy must be taken at all costs. This is done by the outflanking detachment which can be either motorized rifle units or airmobile troops. The outflanking detachment would ideally contain artillery and engineers. Unce the dominant heights have been secured a coordinated attack is made, preferably from two directions, to complete the encirclement and $\frac{57}{57}$

As can be seen in this example, the functions of the various arms determine their employment. Helicopters and ground reconnaissance units find; tanks and mechanized infantry protect, hit, and destroy; airmobils infantry also fix and destroy; finally, artillery, rotary and fixed wing

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aircraft hit. Soviet officers probably had little idea how this tactical system would be adjusted in order to work in the low intensity environment of Afghanistan.

Shortly after the invasion, the Soviets began large scale offensives to pursue the <u>Mujahedin</u>, the resistance, to their strongholds. In February of 1980, 5000 Soviet troops attacked into the Kunar Valley. For two days the Soviets hammered the area with artillery and airstrikes. Troops were then airlanded onto the nearby ridges. Following the air assault, "columns of tanks and BMP infantry combat vehicles swept rapidly northwards, ploughing ST through whatever was left of the settlements." The offensive drove many of the Afghans into exile but failed to crush the resistance.

A year later the Soviets were unable to do any better. Some western observers claimed the "Soviets' tactical reliance on armor curtailed their S9effectiveness in dealing with the guerrillas." At least one analyst pointed simply to the Soviet inability to execute their own doctrine. The motorized rifle divisions which took part in the invasion were filled up C0with at least 50% reservists on 90 day call up. Training was certainly an important factor. A year after the invasion, however, an eyewitness account of a battle that took place at Paghman 15 miles northwest of Kabul offers some more insights. In the three day battle the tanks and BMFs made headway over the hilly terrain. The armor, however, was supported by a few reluctant Afghan infantry units (forces of the Soviet backed regime). The Afghan infantry failed to close with the enemy. The <u>Mujahedin</u> roamed the battlefield in small groups armed with RPG7s and antitank grenades. Despite their advance, by the third day the Soviets were forced to withdraw

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their armor. Obviously, the infantry failed to fulfill their function, the combined arms team was broken.

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The reluctance of the Afghan units to attack their countrymen was understandable, within a year of the invasion the Afghan army disintegrated. From a force of 90,000 men in 1979 the army dwindled to G_2 30,000 in 1981. The Soviets looked for solutions by increasing their troop strength and adjusting their tactical system. Less willing to depend on their allies, the Soviets annually increased their troop strength by 10,000 G_3 in 1981, 1982, and 1984. Soon these Soviet troops were taking to the field and assuming more of the combat burden. The Soviets also began what G_4 one observer called, "a trial and error search" for tactical solutions.

By 1982 the Soviets continued large scale offensives but with some new tactical adjustments, principally with a marked increase in the use of GS airmobile and special operations forces. In May and June the Soviets and their Afghan allies massed 15,000 troops against 3500 <u>Mujahedin</u> in the Panjshir Vally 40 miles north of Kabul. The Soviets attacked essentially into a gorge that is between 300 meters and 2 kilometers at the base. Air assaults were made on the ridges while an armored column attacked up the valley. The air assaults ran into stiff resistance and had to be withdrawn. Without the command of the dominating heights the Soviets took neavy GG losses. After a good deal of fighting the Soviets declared victory and returned to their permanent garrisons. The <u>Mujahedin</u> returned also which prompted another Soviet offensive into the Panjshir later the same year.

On better ground the mechanized forces found it much easier to encircle and thus obtain better results. The city of Herat sits at the western foot

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of the Hindu Kush near the desert. It had long been a hotbed of resistance. Following the Panjshir operation the Soviets surrounded Herat with more than 300 armored vehicles and conducted a house to house search. Most of *G7* the <u>Mujahedin</u> had fled and so the Soviets met little resistance. All the same the Soviets reestablished their control of the city.

The most effective tactical adjustment made by the Soviets was the increased use of special forces (Spetsnaz and airborne units) in small scale search and destroy missions. Curiously, even these operations also occassionally involved armor. A British journalist traveling in Afghanistan reported a mechanized ambush. Six BMDs were airlifted into a <u>Mujahedin</u> infiltration route along the Pakistan border just before dark. In a 10 day period the small armored force destroyed six insurgent supply groups and $\frac{GS}{S}$

Most heliborne operations were still in support of large scale offensives which depended mainly on mechanized forces in the combined arms team. The Kunar Offensive which took place in May of 1985 is a good example of the evolution of the Soviet tactical doctrine and its effectiveness. The primary objective of the Kunar operation was to open the Jalalabad-Chagha Sarai road and establish security posts to block Mujahedin infiltration routes into Pakistan. The operation also had the subsequent mission to destroy insurgent strongholds in Pesh Dara and Asmar. Finally, the Soviets intended to relieve the garrison at Barikot which had been besieged by the <u>Mujahedin</u> for over a year. To accomplish these goals the Soviets gathered two Afghan infantry regiments, two Afghan commando units, a border brigade (all Afghan units were at 50% strength), a

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Soviet motorized rifle regiment, and a <u>Spetsnaz</u> battalion. On 23 May the Soviet units led the way from Jalalabad to Chagha Sarai.

After establishing security posts along the highway and a strong firebase at Chagha Sarai, the Soviets launched attacks on two axes. A supporting attack was made toward Pesh Dara. An air assault was made to assist the advance but became isolated when the ground attack stalled. The air assault force suffered heavy casualties and had to be withdrawn by helicopter. The main attack to Asmar was also supported by Spetshag commando teams which seized key points along the route. The Spetnag teams leapfrogged ahead of the main body during the day but were withdrawn at night. Fierce battles broke out near Narai, but with the help of 150 helicopter gunship and aircraft sorties a day, the Soviets pressed on toward Barikot. As the main column approached Barikot a strong striking detachment was airlifted into the garrison. The Soviets then launched a pincer attack simultaneously from the garrison and the relieving column. In the face of such pressure the <u>Mulahedin</u> withdrew into the mountains. Soviet success, however, was only temporary. Once the Soviet troops returned to their permanent bases, the Mujahedin eliminated the isolated security posts and once again besieged Barikot.

Officially, in 1985 Soviet tactical doctrine still called for 70 mechanized forces to protect, hit, fix, and destroy the enemy. In practice, special heliborne forces were most often used as the outflanking detachments to fix the enemy. As is evident in the Kunar operation and others, the mechanized forces could hit and protect, but rarely could they fix or destroy with significant results. The Soviet doctrine remains

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basically the same, seize the heights, encircle and destroy with a coordinated combined arms attack. In Afghanistan the mechanized forces were unable to fulfill their prescribed function and so their role in the combined arms team changed. Mechanized forces continue to be the primary instrument in large scale offensives to protect Soviet troops while hitting the enemy. Special heliborne forces fix and in small scale operations find, fix, and destroy. Other adjustments to the tactical doctrine have included saturation bombing from high altitude bombers and chemical weapons, much as Fuller predicted.

The failure of the mechanized forces to perform as prescribed is probably due to terrain, organization, and the influence of their operational plan for victory. Years ago J.F.C. Fuller granted that truly steep terrain is unsuitable for mechanized forces. Instead he emphasized their utility in 7! securing the valley floors. Obviously, there are places where tracked vehicles simply cannot go. When the <u>Mujahedin</u> withdraw into the mountains often they can be pursued only by foot and fire. A doctrine which called for outflanking detachments comprised of mechanized forces and other combined arms elements such as engineers and artillery was bound to undergo some adjustments.

The organization of the Soviet army, most of which is mechanized, encouraged them to try the same old hammer and anvil. Their insistence on combined arms is certainly in the right place, but operations in difficult terrain--mountain or jungle call for a high order of cooperation. In many of their operations they appeared unable to execute their doctrine or the adjustments they made due to poor synchronization of the combined arms.

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Isolated air assaults, failure of the infantry to close with the enemy, the failure of the combined arms together to fulfill all the tactical functions required to destroy the insurgents were key problems. Some may point to poor training or reluctant allies, but part of the reason may lie in tactical organization.

If the U.S. Army was any better at utilizing mechanized forces in difficult terrain, it may have been due to the concept and organization of armored cavalry. Although the Red Army has reconnaissance units, they have no comparable organization for an organic combined arms force. The American ACR is a balanced force combining all the arms in a tightly knit unit which constantly trains as a team.

Finally, to a much greater degree than was the case in Vietnam, Soviet tactics are influenced by their operational plan. Apparently, the Soviets intend to defeat the insurgency at an operational rather than tactical level. They are in Afghanistan for the long haul, using military forces not so much to destroy the insurgents but to exhaust and attrite them. The Red Army protects the urban areas and lines of communication, patiently waiting for the insurgency to collapse or for sovietization to remold the country. In order to keep the political and military costs to a mininum, they maintain a relatively small force to deal with an insurgency in a large country. In short, the Soviet doctrine for mechanized forces in Afghanistan has not worked to crush the resistance because the number of troops to implement it is insufficient. The Soviets, "in contrast to American policy in Vietnam, would apparently rather risk losing tactically 72

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The final assessment of Soviet mechanized forces in Afghanistan cannot be made until the conflict ends. Clearly, however, the Red Army entered Afghanistan with a conventional doctrine which had to be adjusted to recognize the functions mechanized forces were able to fulfill on the LIC battlefield.

IV. CURRENT DOCTRINE

The current doctrine for the tactical employment of mechanized forces in LIC is contained in FM 90-8 <u>Counter-Guerrilla Operations</u> and FC 71-100 <u>Armored and Mechanized Division and Brigade Operations</u>. Both manuals discuss armor in LIC but do not agree on some key points.

FM 90-8 <u>Counter-Guerrilla Operations</u> is restrained in its treatment of the employment of armor with the exception of armored cavalry. The manual implies that the employment of mechanized forces will be limited primarily because of terrain and the need to minimize the destructiveness of firepower. The manual discusses the military operations in LIC according to the phase of insurgency. In phase II, guerrilla warfare, "armor forces 73 are not particularly suited for use as a manuever combat element..." Mechanized infantry will also be of limited utility and if used will most likely be dismounted. The offensive missions for forces in phase II include: raids, patrols, ambushes, and encirclement. In phase III, mobile warfare, operations become more conventional and the scope of mechanized operations may increase. In this phase the offensive tactical doctrine calls for missions such as movement to contact, hasty and deliberate

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attacks, exploitation and pursuit. In fact, the reader is referred to FM 17-95 <u>Armored Cavalry Operations</u> and FM 71-2 <u>The Tank and Mechanized</u> <u>Infantry Task Force</u> for details. The manual does emphasize that armored cavalry "when properly used and tailored can accomplish all missions in all 77

In contrast, FC 71-100 <u>Armored and Mechanized Division and Brigade</u> <u>Operations</u> more accurately reflects our experience in Vietnam with come noteworthy improvements. The manual devotes an entire chapter to mechanized operations in LIC. It does not distinguish between phases but in keeping with FM 90-8 and FC 100-20 <u>Low Intensity Conflict</u> prescribes military action for consolidation and strike campaigns. Offensive operations will normally be conducted during strike campaigns. Tactical missions range from reconnaissance in force and raids to the conventional movement to contact, hasty and deliberate attacks. In these operations, tanks provide valuable support to infantry heavy task forces. Terrain permitting, tank heavy task forces and teams may also be used. Mochanized infantry may fight mounted and frequently will do so in the attack and **75** pursuit. Aviation assets will also be key in finding the energy.

FC 71-100 prescribes a better balance between the use of firepower and manuever than was evident in Vietnam. Encirclement is the preferred method of fixing the enemy. When the insurgent is fixed, "combat forces nanuever $\frac{76}{100}$ to kill or capture the guerrillas." The manual states that this is done with an, "emphasis...both on engaging the guerrillas with organic means of 77 fire and manuever and on employing supporting artillery and air support."

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Clearly, the intent here is to destroy the enemy by closing with him. Destruction will not be achieved by firepower alone.

Current doctrine contains both strengths and weaknesses in dealing with the offensive employment of mechanized forces in LIC. Certainly, FC 71-100 does a good job and indicates that in certain conditions armor can not only hit and protect but serve the other combat functions within the combined arms team. Unfortunately, the armor formation which enjoyed the greatest success in counterinsurgency, the armored cavalry, is not adequately addressed anywhere. FM 90-8 simply mentions the fact and refers the reader to FM 17-95 Armored Cavalry. FM 17-95, however, does not mention LIC or any of the tactics and techniques pioneered by the 11th ACR in Vietnam. Curiously, FM 71-100 Armored and Mechanized Division and Brigade Operations devotes an entire chapter to the role of heavy forces in LIC, while FC 71-101 Light Infantry Division Operations (July, 1984) does not address LIC at all. The reader is referred to FM 90-8 and FC 100-20. Although Vietnam demonstrated the absolute need for combined arms, even to the extent of cross attaching light and mechanized infantry, the doctrinal requirements for all the combined arms are not addressed.

Currently, a number of initiatives dealing with armor support of light infantry is under way. The next edition of FC 71-100 should include appendices which discuss the employment of heavy and light forces together. The Directorate of Combat Developments at Ft. Knox has proposed a light armor regiment to support the light infantry. The regiment would include a cavalry squadron and three light armor battalions. The battalions would be equipped with a combat vehicle weighing between 15 and 20 tons. The

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battalion would be organized with four companies, three of which would be equipped with a combat vehicle with a gun system, the remaining company 72 would be armed with a missile system.

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This light armor concept is designed to provide light infantry with mobile firepower. Like other light forces the armor battalions must be capable of rapid world wide deployment. Because of the need for rapid deployment the weight of the combat vehicle is important, consequently, its armor protection will be limited. The light armor battalion is not designed to close with an enemy armed with anti-tank weapons. The function it serves on the battlefield is primarily to hit the enemy and provide limited protection. The function of the cavalry squadron within the $\frac{79}{7}$ regiment is traditional, find the enemy. At the moment, the organization of a light armor battalion appears promising, but the organization of an entire regiment is more doubtful.

V. CONCLUSION

Even as J.F.C. Fuller foresaw many years ago and as military operations in Vietnam and Afghanistan have demonstrated, mechanized forces have an important role to play in low intensity conflict. The importance of combined arms remains as valid for LIC as for all other levels of war. Each of the arms within the team fulfills a combat function. The function of mechanized units depends upon the terrain and operational plan. Since its inception, armor has shown that it can be employed in all but the most difficult terrain. As we look at the third world in which the most likely low intensity battlefields will occur, the army should not assume that terrain will completely limit armor's ability to contribute to the combined arms team.

Additionally, it is entirely appropriate in low intensity conflict for the tactical doctrine to be influenced by the operational plan. Operational planning links tactical engagements and battles to campaigns which ponieve strategic goals. A good operational plan will employ combined arms to the full, but may also determine which arm performs which combat function. In this way operational planning influences the employment of each arm. This ensures that the tactical doctrine assists in reaching the strategic goal. Much more so than in high intensity warfare, how an army fights in low intensity conflict can have immediate affects on its long term chance for success.

The most appropriate tactical doctrine for mechanized forces in UC depends upon the combat function it will serve within the combined arms team. As noted, these functions will vary with terrain and the operational plan. At the very least armor has demonstrated that in the LIC opvironment it can protect and hit. When properly organized and employed it may also be used to find, fix, and in conjunction with the other arms destroy insurgent forces. To make the most of armor on the LIC battlefield the army must have a good combined arms doctrine before it is committed to fight. The evidence suggests that mechanized forces are best employed in small scale cordon search operations from battalion to brigade size. Their

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mobility and firepower are best employed in encirclement operations. or as a reaction force or reserve.

The recent intitiatives in armor support of light infantry is significant, but like light infantry, they seek to address war at all levels. The competing requirements for strategic deployability and the need for a force capable of fighting at all levels of war may invariably lead to the compromise of force design and doctrine. In military operations the battle in LIC is a brigade or battalion commander's fight. Light armor battalions may be a good solution for the support of light infantry, but the optimum organization of mechanized forces in LIC is a combined arms brigade. At the brigade level all the arms necessary to fulfill the combat functions can be brought together in an organic unit. The need to synchronize the arms calls for a high order of training which can best be achieved in a single cohesive unit. The illusive nature of the incurgent demands that the commander have immediately available all the arms necessary to find, fix, hit, and destroy the enemy. The U.S. Army already has a combined arms brigade with a demonstrated ability to contribute to the LIC battlefield; it is the armored cavalry regiment. To the extent armor can contribute to the LIC battlefield, its best weapon is the ACR.

VI. IMPLICATIONS

<u>PROTECT:</u> NEAR TERM- A light armor vehicle of 15-20 tons should meet deployability requirements. Strap on armor might be an alternative once **FO** deployed to the contingency area. If money is not available for research

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and development of a new vehicle, modified M2s or M3s would be preferable to less effective alternatives such as the HMMWV or a product improved M551. In fact, weight of the vehicle is less a deployability problem for LIC than other levels of war. Light forces can always be sent to initially secure the endangered government until the heavier and better protected armored vehicles arrive. Although a light tank may be the optimum solution, we should not hesitate to deploy M60 or M1 series tanks with follow on contingency forces involved in LIC.

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FUTURE- The next generation of armored vehicles should have a common systems base. If weight could be reduced to the 35 or 40 ton range such as the current family of Soviet tanks, deployability of main battle tanks would be greatly improved. In this case a standard organization for armor units would become possible, perhaps eliminating the need for light armor units. Since deployability drives armor to reduce weight and thus also reduce protection, research and development should focus on improving the means of transporting heavier vehicles and developing lighter armor.

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HIT: NEAR TERM- Fire systems which suppress such as the automatic cannon (25mm) and grenade launcher should be most effective in permitting forces to close with the enemy. Large caliber direct fire weapons such as the 105mm tank cannon remain effective against insurgent fortifications and point targets.

FUTURE- A major concern in LIC is to limit the destructiveness of military operations. Technology should be pushed to develop acquisition

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systems which permit the delivery of direct and indirect smart munitions. Discreet fires would limit collateral damage.

FIND: Local and battlefield intelligence play a large role in locating the enemy. The combined arms organization employed on a LIC battlefield should have a military intelligence company attached or organic to its organization. Organic aerial reconnaissance assets would also increase effectiveness.

<u>SIX</u>: NEAR TERM- The use of airmobile and ground forces to fix the enemy through encirclement will continue to be the most viable method of fixing the enemy. Whether airmobile infantry or fast moving mechanized troops are used will depend upon the terrain and the urgency of the situation.

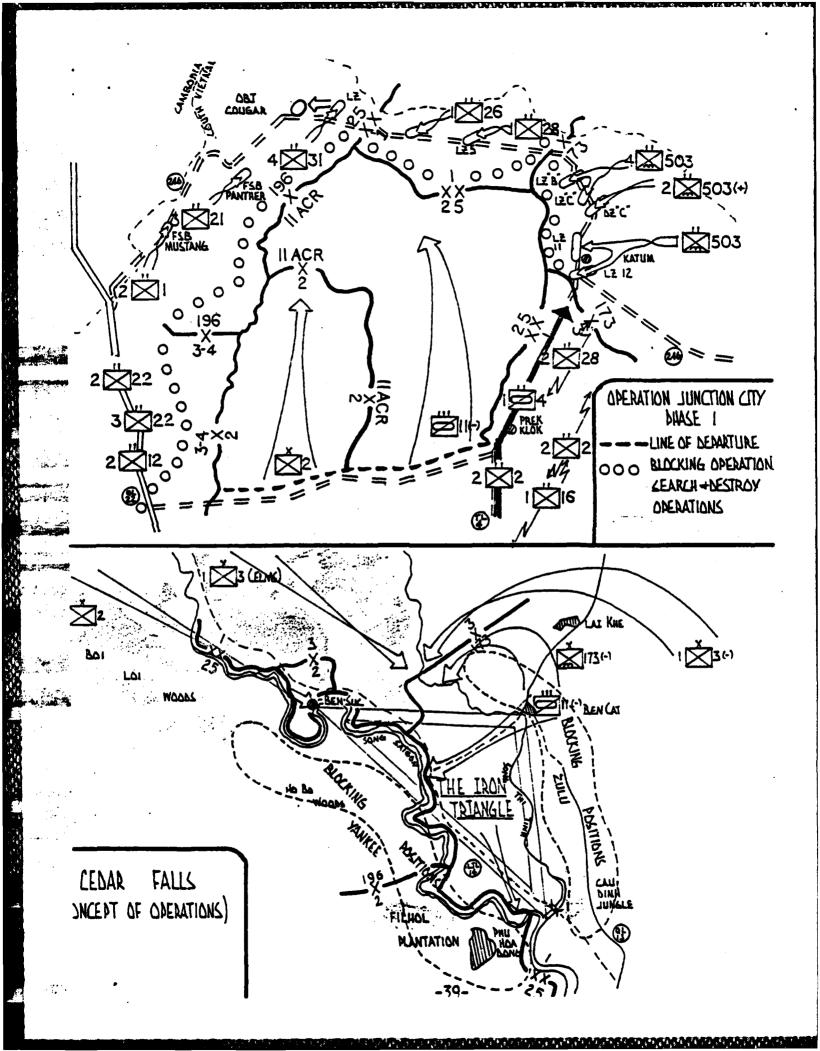
FUTURE- Technology and doctrine should look at the development of armor vehicles which can be deployed on to the battlefield by helicopter. In appropriate terrain this would give the fixing force the advantage of protection, firepower, and mobility after commitment. We may also wish to consider the potential of a non-lethal incapacitating gas. Once such a chemical weapon is delivered into a suspected insurgent area, protected troops could quickly move in to search and sort out insurgents from civilians without loss of human life.

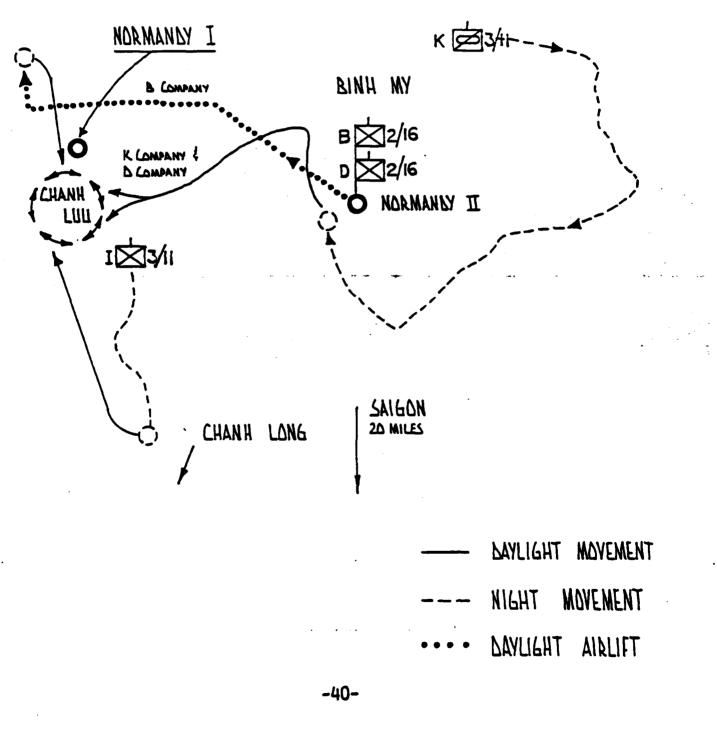
<u>DESTROY</u>: Combined arms will remain the most successful way to conduct offensive operations in LIC. A single combined arms doctrine which prescribes the tactical employment of all arms to include the armored

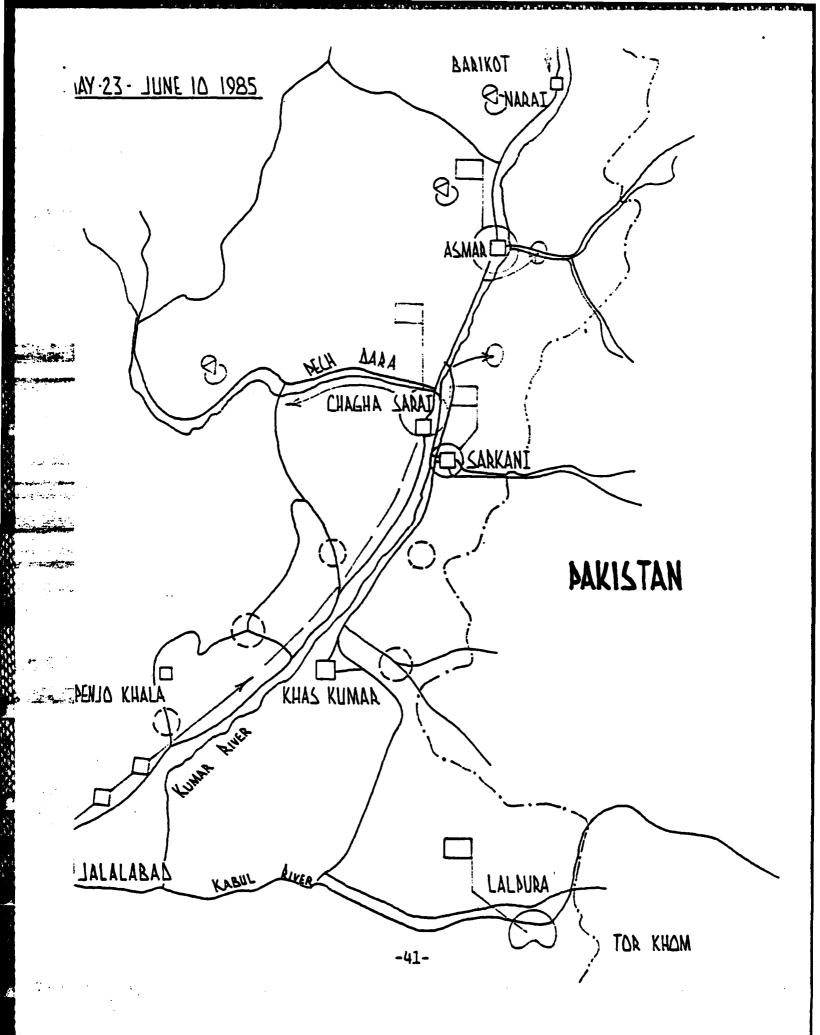
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cavalry will contribute strongly to our chances of success in the most frequent level of war--low intensity conflict.

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ENDNOTES

1. The author considers armor to consist of those forces which fight mounted. This includes tank units, armored cavalry, and mechanized infantry.

2. General Donn A. Starry, <u>Armored Combat in Vietnam</u>, (Salem, New Hampshire: The Ayer Company, 1982), p. 55.

3. A total of 93 ground combat maneuver battalions served in Vietnam. Cf that number 71 were infantry, 10 mechanized infantry, 3 tank battalions, and 9 cavalry squadrons. Shelby L. Stanton, <u>Vietnam Order of Battle</u>. (M.Y.: Galahad Books, 1986), p. 333.

4. Larry A. Briskey, "Soviet Ground Forces in Afghanistan: Tactics and Performance," (unpublished graduate paper, Georgetown University, 1983), p. 5.

5. <u>Ibid.</u>, p.6.

6. Aernout Van Lynden, "Soviets Change Tactics Against Afghan Rebels." <u>Washington Post</u>, 27 December 1982, p. A-26.

7. U.S. Army Armor Center, <u>Armor Officer Professional Development</u> <u>Assessment</u>, (Ft, Knox, KY.: 1986), preface.

8. Captain Jonathan N. House; <u>Toward Combined Arms Variare: A Survey of</u> <u>Twentieth Century Tactics. Doctrine and Organization</u>, (Ft. Leavenworth, KS.: Combat Studies Institute, 1984), p. 1.

9. A survey of military history between 1945 and 1975 reveals that 26 of the 36 major conflicts were of low intensity. Ernest R. Dupuy and Trevor N. Dupuy, <u>Encyclopedia of Military History From 3500 B.C. to the Present</u>, (N.Y.: Harper & Row, 1986), pp. 1259-1345. The senior army leadership also believes LIC will be the most frequent wars of the future involving U.S. forces. General John A. Wickham, "Vision and the Army of Today and Tommorrow", <u>Army Greenbook, 1986-87</u>, (Assn. of the U.S. Army, October, 1986), p. 32.

10. U.S. Army, Field Circular 100-20, Low Intensity Conflict, (Ft. Leavenworth, KS: 1986), p. v.

11. Ihid.

12. Ibid., pp. 2-8 to 2-10.

13. Ibid., p. vi.

14. Ibid., p. 4-13.

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15. J.F.C. Fuller, "Tactics and Mechanization," <u>Infantry Journal</u>, (May. 1927), p. 461.

16. <u>Ibid</u>.

17. J.F.C. Fuller, <u>Armored Warfare</u>, (Westport, CT: Greenwood Press, 1983), originally published in 1932 under the title <u>Lectures on F.S.R. III</u>, p. 164.

18. Ibid., pp. 166-170.

19. Stephen E. Ambrose, <u>Eisenhower, The President</u>, Vol. II, (N.Y.: Simon & Shuster, 1984), p. 210.

20. LTG Bernard W. Rogers, <u>Cedar Falls-Junction City: A Turning Point</u>. (Washington, D.C.: Department of the Army, 1974), p. 2.

21. Starry, Armored Combat, p.50.

22. Ibid., p. 63.

23. The M113 was modified by attaching a shield for the .50 caliber machine gun and adding two side mounted M60 machine guns also shielded. The modified M113s were called armored cavalry assault vehicles (ACAV). Starry, <u>Armored Combat</u>, p. 73.

24. U.S. Army, <u>Field Manual 17-1, Armor Operations</u>, (Washington, D.C., June, 1963), p.197.

25. U.S. Army, <u>Field Manual 17-95</u>, <u>The Armored Cavalry Regiment</u>, (Washington, D.C., 1960), p. 21.

26. Starry, Armored Combat, p. 65.

27. Combat Development Agency, <u>Role of Armored Cavalry in Counter-</u> <u>Insurgency</u>, (Ft. Knox, KY: October, 1962).

28. Starry, Armored Combat, p. 19.

29. Army Concept Team in Vietnam, "Final Report, Armor Organization for Counter Insurgency Operations in Vietnam," DTD 9 February 1966.

30. LTC Raymond Battreall, "Armor in Vietnam", <u>Armor</u>, (May-June, 1966), pp.7-8.

31. Starry, Armored Combat, p. 57.

32. Department of the Army, <u>Evaluation of U.S. Army Mechanized and Armor</u> <u>Combat Operations in Vietnam</u> (MACOV), 1967, p. I-15.

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33. Starry, Armored Combat, p. 57.

34. 11th ACR, After Action Report, DTD March, 1967.

35. Ibid., p. 24.

36. COL William W. Cobb, "11 ACR Report," Armor, (March-April, 1967), p. 31.

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37. LTC T.S. Riggs, "We Need a Few Tanks To ...," Armor, (May-June, 1969).

38. NG Arthur L. West and COL Donn A. Starry, "Armor in Area Warfare," Armor, (September-October, 1968), p. 36.

39. U.S. Army, <u>Field Manual 17-1. Armor Operations</u>, (Washington, D.C.: October, 1966), p. 230.

40. Ibid., p. 222.

41. U.S. Army, <u>Field Manual 17-95</u>, <u>The Armored Cavalry Regiment</u>, (Washington, D.C.: December, 1966), p. 127.

42. Rogers, Cedar Falls-Junction City, p. 77.

43. Starry, Armored Combat, p. 95.

44. Rogers, Cedar Falls-Junction City, p. 121.

45. Ibid., pp. 139-140.

46. <u>Ibid.</u>, p. 157.

47. Shelby L. Stanton, <u>The Rise and Fall of an American Army, U.S. Ground</u> Forces in Vietnam, 1965-1973, (Novato, CA: Presidio Press, 1985), p. 86.

48. MACOV, p. I-18.

49. Ibid.

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50. Ibid., p. I-67.

51. LTC John W. McEnery, "Mainstreet," <u>Armor</u>, (January-February, 1969), pp. 36-39.

52. See GEN Bruce Palmer, Jr., <u>The 25 Year War: America's Military Role in</u> <u>Vietnam</u>, (N.Y.: Simon & Shuster, 1984), p. 157.

53. Harry G. Summers, <u>On Strategy, A Critical Analysis of the Vietnam War</u>, (Novato, CA: Presidio Press, 1982), p. 1.

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54. Zalmay Khalilzad, "Moscow's Afghan War, <u>Problems of Communism</u>," (January-February, 1986), p. 2.

55. General Lieutenant D. Shkrudnev, "Voennyi Vestnik." July, 1978, quoted in Briskey, "Soviet Ground Forces", p. 17.

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56. C.N. Donnelly, "Soviet Mountain Warfare Operations," <u>International</u> <u>Defense Review</u>, (June, 1980), p. 829.

57. <u>Ibid.</u> p. 831.

58. Edward Giradet, <u>Afghanistan, The Soviet War</u>, (N.Y.: St. Martin's Press, 1985), p. 33.

59. Van Lynden, "Soviets Change Tactics," p. A26.

60. Briskey, "Soviet Ground Forces," p. 20.

61. Van Lynden, "Soviets Change Tactics," p. A26.

62. Thomas T. Hammond, <u>Red Flag Over Afghanistan. The Communist Coup. The</u> <u>Soviet Invasion. and the Consequences</u>, (Boulder, CO: Westview Press, 1984), p. 160.

63. Khalilzad, "Afghan War," p. 4.

.64. Ibid.

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67. Charles Doe, "Soviets See Time on Their Side in Afghanistan." <u>Army</u> <u>Times</u>, 21 January 1985, p. 28.

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73. U.S. Army, <u>Field Manual 90-8. Counterguerrilla Operations</u>, (Ft. Benning, GA: Novemeber, 1985), p. 5-7.

74. Ibid. p. 5-8.

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